

## THREE DIMENSIONAL INTERACTIVE STORYBOOK

### CROSS-REFERENCE TO RELATED APPLICATIONS

This application claims priority from U.S. provisional patent application number 60/459,096, which was filed on March 31, 2003 and entitled “Three Dimensional Interactive Storybook”, and which is hereby incorporated by reference.

### BACKGROUND OF THE INVENTION

In the past, it has proved challenging to teach children how to properly organize and develop a story, and to interest children in creating and documenting new, well-structured stories. Accordingly, new devices and methods are needed for helping children, and other users, understand the structure of existing stories, and for creating new stories of their own.

### SUMMARY OF THE INVENTION

A method according to one embodiment of the invention comprises the steps of: (1) providing an outer housing defining a recess; and (2) providing one or more story modules within said recess, each of said story modules corresponding to a portion of a story. In one embodiment of the invention, one or more of the story modules comprises a

stage surface, and a background surface. The stage surface is configured for supporting one or more props for use in acting out a portion of a story. In one embodiment, the background surfaces are configured for providing a background display that is conducive to conveying the portion of the story being acted out using the props. One or more of the story modules preferably includes one or more props that are stored within an interior portion defined by the story module when the story module is in a closed position, and the story module may be moved from a closed position, in which the story module substantially obstructs access to the props; and an open position, in which the story module does not substantially obstruct access to the props. In one embodiment of the invention, the storybook does not include an outer housing, but is simply comprised of a plurality of story modules.

## BRIEF DESCRIPTION OF THE DRAWINGS

Having thus described the invention in general terms, reference will now be made to the accompanying drawings, which are not necessarily drawn to scale, and wherein:

FIG. 1 depicts a front perspective view of an interactive storybook according to one embodiment of the invention.

FIG. 2 depicts a front view of the interactive storybook of FIG. 1 in which the storybook's door is open.

FIG. 3 depicts a front view of the interactive storybook of FIG. 1 in which the storybook's door is open and two of the nine story modules are removed.

FIG. 4 depicts a perspective view of a story module according to one embodiment of the invention. This figure shows the story module in a closed position.

FIG. 5 depicts a front perspective view of the story module of FIG. 4 in which two of the story module's panels (which are side background panels) have been moved into an open position.

FIGS. 6 and 7 depict front perspective views of the story module of FIG. 4 in which two side background panels are in an open position and two upper panels are being moved into an open position by a user.

FIG. 8 depicts a front perspective view of the story module of FIG. 4 in which the story module is in an open position.

FIG. 9 depicts a top view of a story module according to one embodiment of the invention.

FIG. 10 depicts a story module panel that includes a removable indicia card.

FIG. 11 depicts two panels that are made of a single piece of material and that are configured to rotate relative to one another in a hinged manner due to an indentation in the material.

## DETAILED DESCRIPTION OF THE INVENTION

The present invention now will be described more fully hereinafter with reference to the accompanying drawings, in which preferred embodiments of the invention are shown. This invention may, however, be embodied in many different forms and should not be construed as limited to the embodiments set forth herein. Rather, these embodiments are provided so that this disclosure will be thorough and complete, and will fully convey the scope of the invention to those skilled in the art. Like numbers refer to like elements throughout.

One embodiment of the invention comprises an interactive storybook **100** that provides an interactive medium through which both children and adults can enjoy a story. In one embodiment of the invention, the storybook **100** comprises an outer housing **105** that defines one or more recesses **170** for receiving one or more, preferably 3-dimensional, story modules **200** (See Figure 2). As shown in Figure 4, a story module exterior indicia **240** is preferably included on an exterior surface of one or more of the story modules **200**. This exterior indicia **240** preferably indicates the portion of the story (e.g., chapter number or title) to which the particular story module **200** corresponds. For example, a story module **200** corresponding to the sixth part (e.g., chapter or paragraph) of a story might include the symbol “6” or “VI” as its story module exterior indicia **240**.

In one embodiment of the invention, one or more of the story modules **200** is configured to be moved into a closed position in which one or more interior surfaces (and preferably a plurality of, or all, of the story module’s interior surfaces) are at least partially (and preferably entirely) obstructed from view. Thus, in one embodiment of the invention, a user viewing a story module **200** in the closed position would not be able to see what was within the interior of the story module (e.g., any objects inside the story **200**

module or anything painted or printed on the interior walls of the story module **200**). However, the story modules **200** are preferably configured so that a user can view the story module's exterior indicia **240** when the story module **200** is in a closed position. In one embodiment of the invention, this allows users to store the story modules **200** in a closed position (for example, within an outer housing **105**) and easily determine which particular story module **200** corresponds to a particular portion of a story.

Figure 2, for example, shows nine different story modules **200** that are stored in a closed position within an outer housing **105**. Similarly, Figure 4 shows a story module **200** (with an exterior indicia of "VI") in a closed position.

The story module exterior indicia **240** also allow users to easily place the story modules **200** in an appropriate order that corresponds, for example, to a chronological order of individual story portions to which the various story modules **200** correspond. For example, a particular storybook **100** may include nine story modules **200**, each of which corresponds to a chapter in a particular story conveyed by the storybook **100**. In one embodiment of the invention, the exterior indicia **240** of each particular story module **200** visually represents the chapter to which that particular story module **200** corresponds. A user may thus place the story modules **200** in the correct chronological order by placing the story modules **200** in a correct alphanumeric sequence (e.g., by placing them in increasing sequential numerical order from 1 through 9).

In one embodiment of the invention, however, the story modules **200** are configured so that they may be ordered in many different sequences to create unique stories that change based upon the order in which the story modules **200** are read. This allows users to obtain a sense of how a story may change simply by changing the relative chronology of events within a particular story.

One or more of the story modules **200** is also preferably configured to be moved into an open position in which one or more of the interior surfaces of the story module **200** are exposed for viewing. Figure 8 shows an example of a story module **200** in an open position. As may be understood from this figure, in one embodiment of the invention, when the story module **200** is in an open position, an interior indicia **250** corresponding to a portion of a story is available to a user. In one embodiment of the

invention, this interior indicia **250** includes a printed card that includes the text that corresponds to a particular portion of a story.

In one embodiment of the invention, the storybook **100** comprises a plurality of story modules **200**, each of which includes an interior indicia **250** that conveys a portion of a story. Preferably, the various story modules within a particular storybook **100** together comprise all of the parts of a particular story (e.g., in text, video, audio, or any other format). This allows a user to experience the story by opening and appropriately interacting with (e.g., reading, listening to, or viewing) the interior indicia within each story module **200**.

As may be understood from Figures 6-8, in one embodiment of the invention, one or more of the story modules **200** includes a plurality of panels **210-215**. In this embodiment, at least one of the panels (such as stage panel **213**) preferably defines a stage surface (e.g., a surface that is preferably configured for supporting story props, such as dolls). Additionally, at least one of the other panels serves as a background portion for displaying a background scene (much like the background displays used in a play). In one embodiment of the invention, two, three or more panels serve as background panels. For example, in Figure 8, panels **212**, **214** and **215** serve as background panels. In a preferred embodiment of the invention, the panels **210 – 215** are configured so that at least one of the background panels is positioned so that at least a portion of that background panel forms an angle of about 90 degrees with at least a portion of the stage panel **213**. Similarly, in one embodiment of the invention, at least one of the background panels **212**, **214**, **215** is positioned adjacent one edge (preferably a rear edge) of the stage panel **213**.

An example of a particular configuration of the various story module panels **210-215** is shown in Figure 8. In this figure, panel **213** is a stage panel, and panels **212**, **214** and **215** serve as background panels. As may be understood from these figures, the stage and background panels **212-215** preferably cooperate to form a background and stage setting that is adapted for allowing users to act out a scene with props **300** (e.g., dolls and other figures such as trees) in a theater-like manner (e.g., with a substantially fixed background display and props).

In a particular embodiment of the invention, one of the story module panels **210-215** includes an interior indicia **250** that serves to convey at least a portion of a story. For example, in Figure 8, the interior indicia **250** includes the text of a portion of a story titled “The Empty Sorcerer”. Thus, as may be generally understood from Figure 8, each story module **200** is configured to allow users to open the story module **200**, take in (e.g., read, view, or listen to) part of a story via the interior indicia **250**, and then act out that part of the story in a theater-like manner by moving and positioning props **300** adjacent the stage and background panels **212-215**.

In one embodiment of the invention, a prop holder (such as an elongate stake member) **260** is provided adjacent at least one of the story module panels **210-215** for holding props in a particular position relative to the panels. For example, Figure 8 depicts a stage panel **213** that includes two male prop holders **260**. In one embodiment of the invention, one or more of the props **300** is configured to be positioned so that the prop holder **260** extends into the interior of a recess in the prop **300** and, through frictional contact between the prop holder **260** and the interior of the prop’s recess, hold the prop **300** in a particular position relative to the story module panels **210-215**. For example, in one embodiment, a wizard prop **300** is positioned so that a prop holder **260** extends into a recess in the front portion of a wizard prop **300** (e.g., adjacent the wizard prop’s “navel”). This gives the wizard prop **300** the appearance of flying.

Other known devices may also be used as prop holders. For example, one or more of the panels **210-215** and one or more of the props may include Velcro strips that allow users to temporarily adjoin various props **300** with various panels **210-215** in a manner known in the art. Straps, snaps, magnets, or any of a variety of other fasteners may also be used for this purpose.

Returning briefly to the interior indicia **250** (an example of which is shown in Figure 8), in one embodiment of the invention, the interior indicia **250** comprises a surface that is configured to allow users to change the text on the interior indicia **250**. For example, the interior indicia may comprise a portion of dry-erase board that allows users to easily write text onto the board and erase the text as needed. This allows users to make up their own story segments, and then act out these segments using props provided within the interior of the story modules **200**. In one embodiment of the invention, the

interior indicia comprises a digital display screen that allows users to input and modify digital text (e.g., via a connection to a computer, keyboard, or wireless network). In another embodiment of the invention, a reusable writing surface (such as a dry erase board) is disposed adjacent the interior surface of one or a plurality of the story module panels. In various embodiments of the invention, providing a plurality of panels with such a reusable writing surface allows users to both customize the text of their stories and create custom background art, as desired.

In yet another embodiment of the invention, one or more of the story modules comprises an interior indicia receiving portion **500** for removeably receiving one or more interior indicia cards **510**. For example, in an embodiment of the invention shown in Figure 10, the interior indicia receiving portion **500** is a transparent pouch that is affixed to an interior surface of one of the story module panels **510**. This transparent pouch is configured for receiving at least one indicia card **585** into the interior of the transparent pouch **500** so that text on the indicia card (preferably corresponding to a portion of a story) may be viewed through the pouch's transparent material.

In another embodiment of the invention, the interior indicia receiving portion comprises a portion of Velcro material, and the story module **200** comprises one or more interior indicia cards that include a Velcro portion on one side of the card and the text of a story portion on the opposite side of the card. This allows users to easily modify the text displayed within the story modules by simply replacing a current interior indicia card with a new interior indicia card. In one embodiment of the invention, the interior indicia cards may be sold in sets of story cards (each set of story cards corresponding to a particular story) to allow users to modify a single storybook to tell many different stories (e.g., by replacing a current set of story cards within the storybook with a different set of story cards).

Also, in one embodiment of the invention, a storybook exterior indicia **140** (See Figure 1) on the exterior of the storybook **100** is also configured to be easily changed by the user (e.g., by temporarily affixing an exterior indicia card to the exterior surface of the door **130**) to correspond to the title of the story told by the various story modules. (This storybook exterior indicia **140** may alternatively be permanently affixed to the storybook.)

As will be understood by one skilled in the art, the exterior and interior indicia cards discussed above may be removably attached to the appropriate portions of the storybook **100** using any appropriate fastener or other mechanism. Examples of such fasteners and mechanisms include: Velcro, magnets, and transparent pouches that are affixed to the appropriate surface of the storybook and that are configured for receiving an appropriately sized exterior or interior indicia card. Such transparent pouches are advantageous because they allow the various indicia cards to be easily replaced, and also protect the indicia cards from stains or improper handling.

Figure 1 shows a storybook **100** according to a particular embodiment of the invention in which the storybook **100** is in a substantially closed configuration. As may be understood from this figure, in this embodiment of the invention, the storybook **100** comprises an outer housing **105** that comprises a storybook module retaining portion **110** (which may be, for example, substantially in the form of a hollow cabinet with shelves) and a door **120**.

Figures 2 and 3 show the storybook **100** with the storybook's door **120** is in an open position. As may be understood from these figures, the door **120** is configured for selectively restricting access to an interior portion defined by the storybook module retaining portion **110**. As may be understood from Figures 2 and 3, the storybook module retaining portion **110** is preferably configured to receive one or more story modules **200**, which are discussed above. The storybook module retaining portion **110** also preferably comprises one or more horizontal shelves **160** for providing support for one or more of the story modules **200**.

In another embodiment of the invention (not shown), the storybook module retaining portion **110** may also include one or more vertical dividers for providing a vertical barrier between two or more of the story modules **200**. In a preferred embodiment of the invention, the storybook module retaining portion **110** defines at least one individual compartment that is dimensioned to receive only one individual story module **200**. In one embodiment of the invention, this compartment is dimensioned to substantially conform to an outer surface of a particular individual story module **200**.

Figures 5 – 8 depict a story module **200** according to a particular embodiment of the invention in various configurations. As may be understood from these figures, this



story module **200** is configured to be moved from a closed position in which the story module is substantially in the form of a cube, and into an open position in which one or more interior portions of the story module **200** are exposed to a user. As shown in Figures 5 through 8, in one embodiment of the invention, one or more of the story module panels **210-215** (specifically, in this embodiment, story module panels **210** and **211**) interact to provide the effect of a curtain being raised (as in a play) when the panels are moved from a closed to an open position. This provides an enhanced dramatic effect when the story modules are opened.

As may be understood from Figure 8, in one embodiment of the invention, a central background panel **212** is attached (e.g., substantially rigidly attached) adjacent a stage panel **213** (e.g., with L-brackets) so that these two panels **212, 213** form a generally L-shaped formation. In one embodiment of the invention, this L-shaped formation is substantially rigid. Also, in a particular embodiment, a first side background panel **214** is attached (preferably via a hinge **225**) to the central background panel **212** adjacent a first side edge of the central background panel **212** as shown in Figure 8. Similarly, a second side background panel **215** is attached (preferably via a hinge **225**) to the central background panel **212** adjacent a second side edge (e.g., an edge that is parallel to and offset from the first side edge) of the central background panel **212** as shown in the various figures. In addition, a first upper panel **210** (preferably including an interior indicia **250**) is attached (preferably via a hinge **225**) adjacent a top edge of the central background panel **212**. As shown in Figure 8, a second upper panel **211** is attached (preferably via a hinge) to the outer edge **227** of the first upper panel **210** (e.g., so that the first upper panel **210** is disposed substantially between the second upper panel **211** and the central background panel).

As may be understood from Figures 4 through 8, the various panels **210 – 215** are preferably configured so that that they may be moved from a closed position, in which the panels form a substantially cube shape, to an open position, in which the various background and upper panels **210-212** and **214-215** form a substantially planer T-shape, and the stage panel **213** extends outwardly from the top center portion of the T-shaped array of panels **210-212; 214-215**. In a preferred embodiment of the invention, when the story module **200** is in a particular open position, the angle formed by: (1) the

background and upper panels 210-212 and 214-215; and (2) the plane formed by the stage panel 213, is approximately 90 degrees.

### **Other Embodiments of the Invention**

Although the story modules 200 described in regard to the embodiment above are generally in the shape of a cube when closed, as will be understood by one skilled in the art in light of this disclosure, one or more of the story modules 200 may be made in any convenient three dimensional or two dimensional shape or form. Thus, one or more of the various story modules 200 may be, for example, in the form of a three-dimensional rectangular shape, a pyramid, a cone, or a cylinder.

For example, as shown in Figure 9, in one embodiment of the invention, one or more of the individual story modules 400 may be generally in the form of a hollow sphere. As may be understood from this figure, in one embodiment of the invention, at least one story module 400 comprises a hollow sphere that comprises two hollow substantially hemispherical story module portions 410, 420 that are attached, preferably via a hinge 425, so that they can be moved between: (1) a closed position, in which the two story module portions 410, 420 cooperate to form a hollow sphere 400 (see Figure 9), and (2) an open position, in which interior portions of the two story module portions 410, 420 are exposed. This allows users, for example, to access an interior indicia (such as the interior indicia 250 discussed above) disposed, for example, on an interior surface of one of the story module portions 410, 420. This allows the user to acquire the information conveyed by the interior indicia by, for example, reading a portion of a story written on the interior indicia.

In another embodiment of the invention, the story modules are actually individual “sub-books” within a larger book. Thus, each story module is in the form of a small book that only tells one portion of a larger story and that may be individually manipulated and read separately from the larger book. In a preferred embodiment of the invention, one or more of the sub-books includes a surface, such as a dry-erase surface, that allows users to easily write or draw on the surface and then later erase the surface so that they can write a new story portion or draw a new drawing on the surface.

In a particular embodiment of the invention, the storybook module comprises electronic components (such as those known in art in various Halloween-themed toys) to create an audio or visual effect in response to: (1) one or more of the storybook modules being moved from a closed to an open position; and/or (2) one or more of the storybook modules being removed from the module retaining portion. Such audio effects may include for example, playing an electronic noise or song. Such visual effect may include, for example, executing a lighting effect (such as strobe lights) within the interior of the storybook module or generating simulated smoke within the interior of the storybook module.

### **Exemplary Inventive Methods**

A method according to one embodiment of the invention comprises the steps of: (1) providing an outer housing defining a recess; and (2) providing one or more story modules within said recess, each of said story modules corresponding to a portion of a story. In one embodiment of the invention, one or more of the story modules comprises a stage surface, and a background surface. The stage surface is configured for supporting one or more props for use in acting out a portion of a story. The background surfaces are configured for providing a background display that is conducive to conveying the portion of the story being acted out using the props. One or more of the story modules preferably includes one or more props that are stored within an interior portion defined by the story module when the story module is in a closed position. In one embodiment of the invention, the storybook does not include an outer housing, but is simply comprised of a plurality of story modules.

### **Assembly and Materials**

As will be understood by one skilled in the art, various embodiments of the invention may be made of any suitable material such as wood, metal, plastic, or paper-based materials. Also, as will be understood by one skilled in the art, two or more of the various panels may be permanently attached, or made from a single piece of material. In such an embodiment of the invention, the hinged relationship between the panels may be provided by an indentation between the two panels. An example of this embodiment, in

which the panels are preferably made of a flexible material such as plastic, is shown in Figure 11.

### **Conclusion**

Many modifications and other embodiments of the invention will come to mind to one skilled in the art to which this invention pertains having the benefit of the teachings presented in the foregoing descriptions and the associated drawings. Therefore, it is to be understood that the invention is not to be limited to the specific embodiments disclosed and that modifications and other embodiments are intended to be included within the scope of the appended claims. Although specific terms are employed herein, they are used in a generic and descriptive sense only and not for purposes of limitation.